

SEPT. 1st, 1890.

# CARTERS' CROSS BRED

REGISTERED TRADE MARK.

AWARDED  
THE ORDER  
"DU MÉRITE  
AGRICOLE"



BY THE  
FRENCH GOVERNMENT.

AWARDED  
THE ORDER  
"DU MÉRITE  
AGRICOLE"



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FRENCH GOVERNMENT.



## WHEATS,

WITH PARTICULARS OF OTHER

## FARM CROPS FOR AUTUMN SOWING.

APPOINTED ROYAL SEEDSMEN BY SPECIAL WARRANTS,

237 & 238, HIGH HOLBORN, LONDON.

# FACTS OF INTEREST TO WHEAT-GROWERS IN ALL PARTS OF THE WORLD.

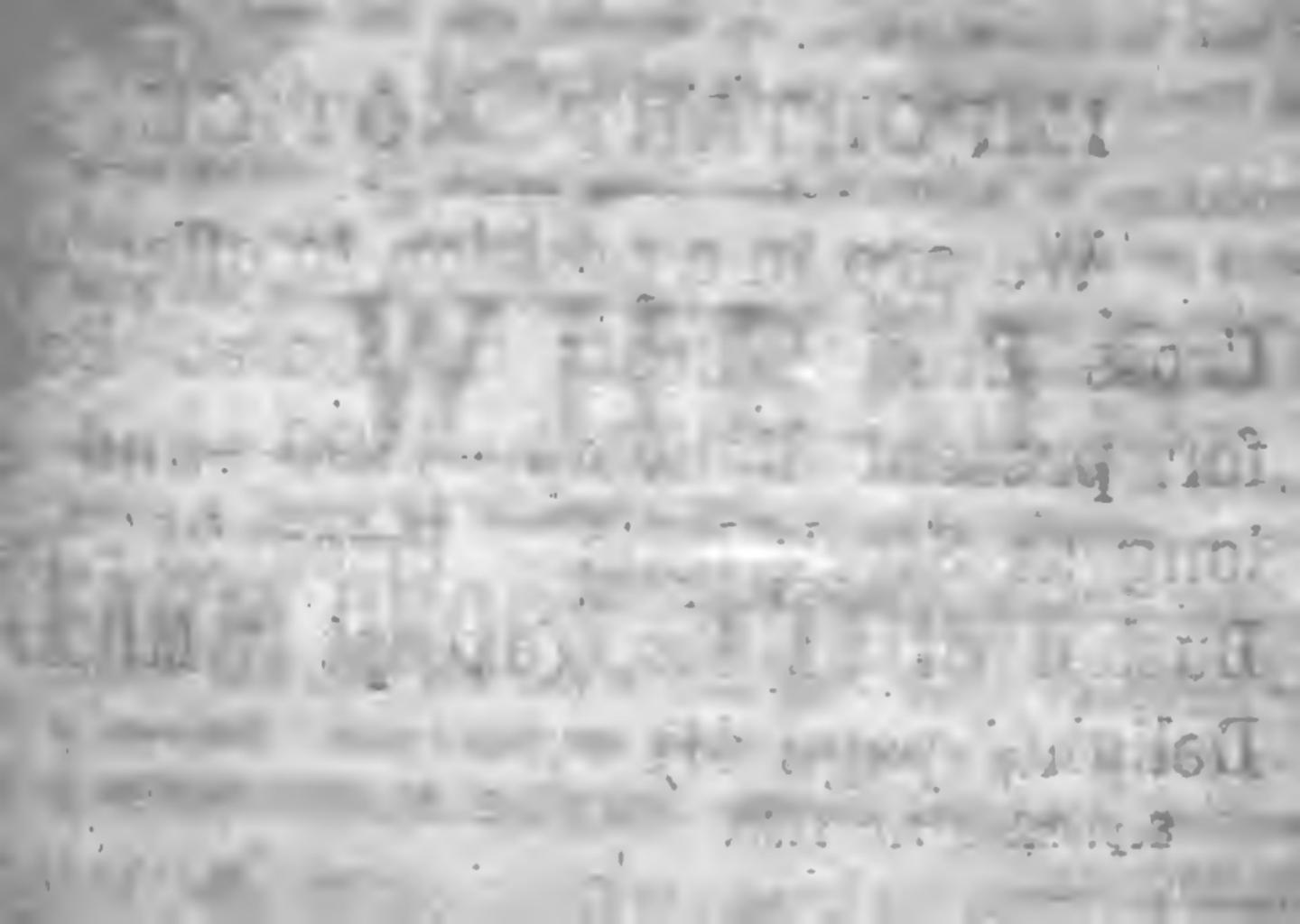
**DEVON.**—"The whole group of Messrs. Carters' Cross Bred Wheats are equally good in their yield. Had it not been for the birds, I should have had a great crop of each."—J. BULTEEL, Esq., Ivybridge.

**MEXICO.**—"A Customer who has tested the whole set of Carters' Cross Bred Wheats in Mexico writes that the crops were so satisfactory that he intends making an extended trial this year. Other English Wheat that he grew was an entire failure."

**LINCOLNSHIRE.**—W. HANNAN, Esq., Corby, writes: "I estimate 48 to 50 bushels per acre. Average previously, 32 bushels. Have cut a full week before any other kinds in the neighbourhood. Quality very good and a fair good crop."

A Customer in Warwickshire writes: "All about here declare they never saw anything so promising as the Cross Bred Wheats; for myself, it looked as Gold to Copper compared with Crops around."

**LADY KILMOREY** writes: "The result of your New Cross Bred Wheats has been very good in spite of constant storms and heavy rains. Hundreds of Farmers have been to see them growing. Only one of the eleven varieties is 'laid' by the heavy rains."



# **IMPORTANT NOTICE.**

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We are in a position to offer  
the best wheats in Sealed Bid  
for January 1<sup>st</sup> 1890.

long ago (The "Wheat  
Bushel of '63" (1863-64),  
Delight," page 41).

September 1<sup>st</sup>, 1890.

# PROFITABLE WHEAT-GROWING.

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The elements necessary to success are admitted to be the production—under the most adverse influences of climate—of a sufficient quantity per acre to show a fair margin of profit after paying expenses, and the cultivation of those varieties of Wheat that will command the highest market prices.

We maintain that these advantages have been gained by farmers who have tried our Cross Bred Wheats this season—one of the worst experienced for many years—and the evidence we produce in the following pages is more than sufficient to confirm our own judgment, that for general good quality of grain and straw, for earliness and increased productiveness, our Cross Bred Wheats are far and away superior to any other Wheats in ordinary use.

In many cases the grain holds its own with popular imported stocks, whilst from the fact of a judicious blending of Red and White Wheats in the one berry, it is confidently anticipated that millers will rapidly recognise the high milling value of our Cross Bred Wheats.

In the selection of live stock and implements, the intelligent farmer exercises his own judgment based upon his experience, and spares no expense to obtain the best in its class. Is not this practice equally important in the selection of seeds and seed grain? And yet how few there are who have hitherto attached serious consideration to this vital subject.

We believe Wheat-growing can be and will be made profitable in this country by a more careful study of the adaptability of the soil, and a wise selection of the most desirable varieties, as recommended by Mr. H. Evershed in the following extract from the Journal of the Royal Agricultural Society:

“If English farmers are to grow Wheat successfully, they must cultivate only those varieties that possess the merits of early maturity, abundance of straw of fine quality, productiveness, and high quality, so that in view of keen foreign competition the grain may hold its own in the estimation of millers, or prove valuable for mixing with the hardest grains of India and America.” (See also pages 2 and 3.)

**JAMES CARTER & CO.**

## EXTRACTS FROM AN ARTICLE UPON

**Varieties of Wheat and Methods of Improving them,**

By MR. H. EVERSHED,

*In the "JOURNAL of the ROYAL AGRICULTURAL SOCIETY of ENGLAND,"*

VOL. XXV., PART I., APRIL, 1889.

Messrs. Carter's experiments in the cross-fertilisation of wheat commenced in 1883, when twenty-two crosses were effected between sorts of wheat which had been previously collected and sown for that purpose in the autumn of 1882. The experiments were partly suggested by the offer of prizes by the Royal Agricultural Society for the best new varieties of wheat, and partly by personal observation of the disastrous consequences of late harvests in Scotland, where wheat frequently remains in the field till the end of October or even in November, the varieties in cultivation ripening too late for the climate.

The plan laid down at the outset was the use of good parent sorts and the crossing of varieties as wide apart as possible in appearance and character. The objects to be attained were early maturity, productiveness, hardiness, and high quality both of grain and straw. Another object kept in view was the crossing of red and white wheat, so as to obtain in one grain the colour of white wheat with the strength and body of red. Among the earliest results may be mentioned that in 1884 the twenty-two cross-bred wheats produced an average of twenty-two ears per plant, and that in 1885 each ear, taking a full ear of each cross, produced an average of sixty-five grains.

It is important to notice that ordinary cultivation was resorted to, as opposed to thin seeding and the production of giant ears. The experiments were carried out at Messrs. Carter's Forest Hill Nurseries, and as these are near my house I have enjoyed at all times and seasons the frequent opportunity of inspecting the trial plots. I must be content to offer a very brief summary of these experiments, showing the varieties of some of the wheats that have been used as parents, and the peculiarities of the offspring.

In crossing red and white wheat together a white sort called Fill-measure, with smooth chaff and square ears, was crossed with Selected Red Square Head wheat as the male parent. The offspring has longer straw than either parent, and longer ears than the male, which has, however, clearly influenced the cross-bred offspring in the shape of the ear and the colour of the grain. This same successful cross turns out to be satisfactory in regard to quality, as well as being one of the earliest wheats next to the Talavera group.

Another cross between Royal Prize Red and another long-eared variety, exhibits a curious freak, since the long, square, thick-set ears are distinct from those of either parent. In another cross between the same red wheat and a long-eared white wheat, as male, the influence of the latter has been most potent in the colour of the grain; while, curiously enough, the offspring ripens a fortnight earlier than either parent.

A cross between a woolly-chaffed white wheat and a smooth-chaffed club-headed red for male, proves exceedingly productive and vigorous, one plant having yielded sixty ears, and a field crop having produced at the rate of fifty-four bushels per acre. The colour of the grain shows the influence of each parent alike.

In another case square-headed white, female, and long-eared white, male, have produced a wheat which proves to be the last sort to thrust its ear from the sheath of the stem, while, next to Talavera, it is one of the earliest to mature. Except that the ear is closely packed, it favours most the male parent, having an ear and grain of the same colour and the same length of straw.

A cross was effected between Talavera and Royal Prize Red for the purpose of obtaining the early habit and superb quality of the former, combined with the vigorous constitution of the latter. The result proves a decided success, the offspring of the cross, or rather the latest selection from it, possessing the desired qualities.

The selection from a cross between a bearded April wheat and an American bearded variety proves earlier than either parent, with grain quite equal to that of the well-known Russian Kubanka. This, of course, is a spring wheat, and the habit derived from its parents must be kept up by constant sowing in spring.\*

One of the most singular results of crossing is found in a sort which has received the characteristic name of Birdproof. The female parent was Fill-measure, the male an American bearded wheat, and the cross exhibits sharp-pointed awns on some of the glumes at the apex of the ear, a defence which birds have shown themselves shy of approaching.

Many other crosses have been effected, and the offspring are now under selection, but the foregoing account of some of the most immediate and characteristic results of crossing distinct varieties will perhaps suffice.

\* Perhaps I may venture to commend this sort to certain districts in the Far West, where only the quick wheats can escape the spring and autumn frosts and mature within the very short limits of the allotted season. The cross has been grown side by side with some Russian wheats grown in Canada on official recommendation, and sent to Messrs. Carter by Professor Saunders, and has greatly excelled them in the amount of produce as in other respects.—H. E.

It may, however, be mentioned that length of straw is generally influenced by the male parent, and form and size of ear by the female. The prostrate or, as they are commonly called, the creeping forms of wheat usually bear ears more or less drooping.

Like other experimenters, Messrs. Carter have found that cross-bred seedlings usually produce a variety of forms, and that careful selection is required to fix in a permanent form the most desirable types. The result of crossing a *woolly-chaffed* wheat and a smooth-chaffed wheat has been the production of 75 per cent. of ears with smooth chaff, and 25 per cent. with rough or woolly chaff ears. Again, the parents of one of the crosses being a red wheat and a white wheat, the 1887 crop of this cross produced some ears with woolly chaff, and, but for the care exercised in the sowing of the grain so as to render an accident in the sowing of a grain from another crossing practically impossible, the natural assumption would have been that such an accident had occurred, and the experimenters themselves would have entertained some doubt if the woolly-chaffed offspring had not exhibited unmistakable traces of their actual origin. It was found, however, that whereas the chaff in this selection was what is familiarly known as of woolly or velvet texture, the straw when ripe had the peculiar purple colour of the female parent; and so far as Messrs. Carter's observations have extended in the cultivation every year of something like a hundred and fifty varieties of wheat already in commerce, they have failed to find any variety possessing the peculiarities shown in the cross.

Messrs. Carter's is the first systematic, and I might say determined, attempt in this country to improve the varieties of wheat by cross-fertilisation, their manager residing upon the spot. The following Table gives the results of some minute observations of the progress of the wheats grown upon a strong loam with yellow clay subsoil 16 inches from the surface:—

*Statistics showing the period at which twelve selections of Cross-bred Wheats made their growth in 1888, together with comparative Tables giving the dates when "in ear" and when "ripe" in 1887 and 1888.*

Cross-bred wheats.	Height of wheat plants, May 15, 1888.	Growth of wheat plants, May 15, 1888, to		Growth of wheat plants, June 1, 1888, to		Final height of wheat plants, when regular measurement ceased.	Date when in ear, 1888.	Date when ripe, 1888.	Date when in ear, 1887.	Date when ripe, 1887.
		inches.	inches.	inches.	inches.					
No.		Inches.	Inches.	Inches.	Inches.					
3	16	10	24	3	57	June 25	Sept. 1	June 23	Aug. 10	
4	20	12	18	6	57	" 25	" 1	" 22	" 10	
7	15	6	18	8	54	" 25	" 6	" 22	" 10	
9	15	8	20	5	54	" 25	" 6	" 20	" 8	
10	14	14	16	11	56	" 25	" 1	" 28	July 30	
13	15	15	24	—	54	" 16	Aug. 20	" 16	" 28	
15	16	16	24	1	57	" 25	Sept. 1	" 22	Aug. 10	
16	17	11	29	—	57	" 25	" 1	" 24	" 10	
19	14	18	19	3	55	" 25	" 1	" 23	" 6	
21	13	15	22	2	52	" 26	" 1	" 27	" 10	
22	16	13	18	—	47	" 30	" 10	" 28	" 6	
31	14	18	21	2	57	" 25	" 10	" 20	" 10	

From the above Table it will be observed that the coming into ear period in 1887 and 1888 did not show a marked difference, whilst the ripening in 1888 was from three to four weeks later than in 1887. The comparative growth of the wheats in different periods of the summer and the height of the straw of each and dates of coming into ear are all observations of importance; but the dates when the corn of each plot was ripe are of special significance. On this important point it may be observed that the harvest of 1887 was not an early one, and that July 28 and 30 were early dates for the ripening of wheat.

Messrs. Carter's new wheats, according to the reports forwarded to me by several growers, appear to possess in a high degree the vigour of constitution which is often observed in crosses either among plants or animals. One of the growers writes to me that the cross grows very vigorously, "in fact it runs right away from the ordinary wheat."

# NEW CROSS BRED WHEAT.



## CARTERS' QUEEN.



### (SELECTION D.)

Colour and Quality of Grain	...	...	Pale amber, long, full, transparent.
Length of Straw (with Ear)	...	...	54 inches.
Length of Ear	...	...	6 inches.
Colour of Chaff	...	...	Pale yellowish white.
Average Period of Ripening on Clay Loam Soil	...	...	End of July.
Parents	...	...	<i>Imperial White and Smooth Chaff Club-headed Red Wheats.</i>

### GENERAL CHARACTERISTICS.

Extremely productive (habit semi-erect), a plant in 1886 having produced 60 fully developed Ears, showing a yield of three-thousandfold ! Other plants of this variety have since been found with 40 to 50 Ears. This Selection possesses the properties of both parents in general appearance of straw and grain.

Straw medium, stout, and very strong, of a bright yellowish-white colour when ripe; chaff velvety; grain of excellent quality.

Two Ears of this Selection contained respectively 70 and 67 grains.

This Selection was estimated to produce 54 bushels per acre upon poor burning soil at our Seed Farms in 1887.

Strongly recommended for early Spring as well as Autumn sowing.

"One plant was pointed out to us which bore 60 distinct, very long, and well-filled ears, averaging about 50 grains per ear, or a total of about 3,000 grains grown from one seed."—*Times*.

### PRACTICALLY FREE FROM RUST, 1890.

J. F. BEDDALL, Esq., Ampthill, writes: "I have a grand crop of Carters' New Cross Bred Wheat, 'The Queen.'"

Mr. H. G. BARNHAM, Grinston Park Farm, Norfolk, writes: "I find the quantity and quality of the straw of Messrs. Carters' New Cross Bred Wheat, 'The Queen,' to be very good."

Price 21/- per Bushel of 63 lbs.

*Offered so long as stock lasts. All orders executed in strict rotation.*

CARTERS' QUEEN.

**FEMALE**

**PROGENY**

**MALE**

HAREF.

A PHOTOGRAPH FROM NATURAL SPECIMENS. EXACT SIZE.

CARTERS' PRINCE OF WALES.



A PHOTOGRAPH FROM NATURAL SPECIMENS, EXACT SIZE.

# NEW CROSS BRED WHEAT.

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## CARTERS' PRINCE OF WALES.

### (SELECTION B.)

Colour of Grain	...	...	...	Pale amber red, even.
				Very translucent.
Length of Straw (with Ear)	..	..	..	60 inches, fine quality.
Length of Ear	....	....	....	4½ inches.
Colour of Chaff	....	....	....	Pale stone white.
Average Period of Ripening on Clay Loam Soil	...	...	Third Week in July.	
Parents	...	...	Carters' Royal Prize Red and Pedigree Red Wheats.	

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### GENERAL CHARACTERISTICS.

This is an early Wheat.

In this Selection a curious result has been produced, for whilst the male gives length of straw, the Ears are quite distinct from either parent, and may be described as extra long, square-headed, very thick-set and even, habit erect. It is a heavy cropper, and the grain is of good milling quality.

Straw long, glaucous, and very white when ripe.

Two Ears of this Selection contained respectively 78 and 68 grains.

Mr. T. W. REYNOLDS, Chard, writes: "With a fine summer I am quite sure my report to you of your 'Prince of Wales' Wheat would have afforded the greatest satisfaction. . . . I think it will answer well in this part in a good season. The sample will be much better than our other grain."

Price 21/- per Bushel of 63 lbs.

*Offered so long as stock lasts. All orders executed in strict rotation.*

# NEW CROSS BRED WHEAT.

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## CARTERS' EARLIEST OF ALL.

### (SELECTION F.)

Colour of Grain	...	...	<i>Bright amber, long and full.</i>
Length of Straw (with Ear)	...	52	<i>inches.</i>
Length of Ear	...	...	<i>7 inches.</i>
Colour of Chaff	...	...	<i>Lemon white.</i>
Average Period of Ripening on Clay Loam Soil	...	<i>Middle of July.</i>	
Parents ...	<i>Talavera Amber and Carters' Royal Prize Red Wheats.</i>		

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### GENERAL CHARACTERISTICS.

In this Selection we have unquestionably the earliest Wheat in cultivation. It is very productive, habit semi-erect, and should prove specially valuable in those districts of the world where the summer seasons are short and a rapid-ripening Wheat required.

Straw medium length, rather thin, but stands stiff and strong on the ground, pale colour.

This Selection was estimated to produce 50 bushels per acre upon poor burning soil at our Seed Farms in 1887.

Recommended for early Spring as well as for Autumn sowing.

"The improved progeny (Selection F) ripens a fortnight earlier, and what is more, appears to possess far better quality, and is larger-headed than Talavera."—*Bell's Weekly Messenger.*

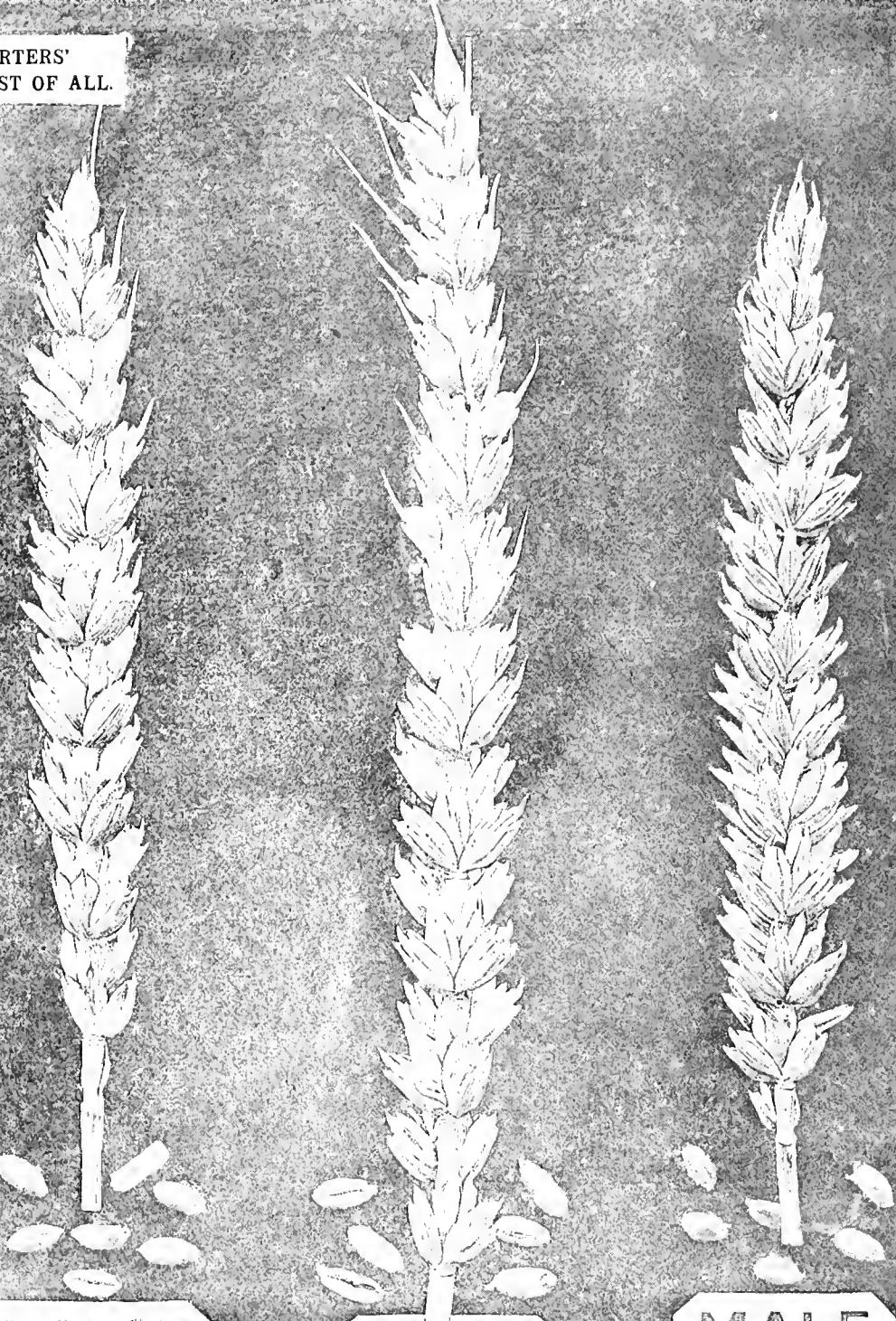
### ABSOLUTELY FREE FROM RUST, 1890.

Mr. LEONARD PATTERSON, Hemel Hempstead, writes: "I am of opinion that Carters' New Cross Bred Wheats are an improvement upon our old stocks. 'Earliest of All' will ripen much sooner than any of our old varieties. Unfortunately the birds have nearly destroyed this plot, as it was ripe before the rest. There is a plot of ordinary spring wheat next to the Cross Bred which is not nearly as good."

Price 21/- per Bushel of 63 lbs.

*Offered so long as stock lasts. All orders executed in strict rotation.*

CARTERS'  
EARLIEST OF ALL.



FEMALE

PROGENY

MALE

A PHOTOGRAPH FROM NATURAL SPECIMENS, EXACT SIZE.

CARTERS' MILLER'S DELIGHT.



FEMALE



PROGENY



MALE

A PHOTOGRAPH FROM NATURAL SPECIMENS. EXACT SIZE.

# NEW CROSS BRED WHEAT.

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## CARTERS' MILLER'S DELIGHT.

### (SELECTION L.)

(Now offered for the first time.)

Colour and Quality of Grain	...	<i>Pale translucent stone white.</i>
Length of Straw (with Ear)	...	<i>54 inches.</i>
Length of Ear	...	<i>5 inches.</i>
Colour of Chaff	...	<i>Pale stone white.</i>
Average Period of Ripening on Clay Loam Soil	...	<i>End of July.</i>
Parents...	...	<i>Talavera Amber and Carters' Birdproof Wheats.</i>

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### GENERAL CHARACTERISTICS.

When ripening, this Selection is whiter in colour of straw and chaff than any other variety, and there is no other Wheat with which we are acquainted that has such a clean, bright "flour-like" appearance when in growth.

It is comparatively early, an enormous cropper, and the quality of the grain is pronounced to be excellent.

It is of upright habit, flag bold and deep-coloured.

One of the parents used in this cross was the Birdproof variety (see page 24).

Recommended both for early Spring and for Autumn sowing.

### OFFERED NOW FOR THE FIRST TIME.

In Sealed Bags, price 30/- per Bushel of 63 lbs.

# NEW CROSS BRED WHEAT.

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## CARTERS' PEARL.

### (SELECTION E.)

Colour and Quality of Grain ... *Pale transparent amber white.*

Length of Straw (with Ear) ... *60 inches.*

Length of Ear ... ... ... *6 inches.*

Colour of Chaff ... ... ... *Pale stone white.*

Average Period of Ripening on Clay Loam Soil *First Week in August.*

Parents ... *Chidham White and Golden Grain Amber Wheats.*

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### GENERAL CHARACTERISTICS.

Very productive, habit erect, the grain possessing the peculiar round form of the male parent; in appearance somewhat resembling the "pearl barley" of domestic use.

Very distinct; Ear close-set, even in form, and slightly bearded. Straw long and stout, of a rich creamy yellow colour and of splendid quality for plaiting. A very robust Wheat.

Two Ears of this Selection contained respectively 62 and 55 grains.

This Selection was estimated to produce 48 bushels per acre upon poor burning soil at our Seed Farms in 1887.

### PRACTICALLY FREE FROM RUST, 1890.

J. RICHARDSON, Esq., Selby, writes: "Carters' New Cross Bred Wheat, 'Pearl,' is very fine in quality. I estimate getting 40 bushels per acre. The straw is short but firm, and grand quality."

Price 21/- per Bushel of 63 lbs.

*Offered so long as stock lasts. All orders executed in strict rotation.*

CARTERS' PEARL.



THE CARTER CO.

PROGRESSIVE

A PHOTOGRAPH FROM NATURAL SPECIMENS, EXACT SIZE.

CARTERS'  
HOLBORN WONDER.

MALE

PROGENY

MALE

# NEW CROSS BRED WHEAT.

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## CARTERS' HOLBORN WONDER.

### (SELECTION C.)

Colour	...	...	...	...	...	Pale brown, translucent.
Length of Straw (with Ear)	...	...	...	...	...	54 inches.
Length of Ear	...	...	...	...	...	6 inches.
Colour of Chaff	...	...	...	...	...	Distinct shaded pale buff brown.
Average Period of Ripening on Clay Loam Soil	...	...	...	...	...	End of July.
Parents	...	...	...	...	...	Golden Drop Red and Mammoth White Wheats.

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### GENERAL CHARACTERISTICS.

A long-eared Wheat, habit semi-erect, stout strong straw, specially remarkable for productiveness.

The influence of the male parent is shown in the length of the straw, the colour and character of the grain, and by the peculiar short-awns at the apex of the chaff. Straw medium length, stout and strong ; a heavy cropper, of fine quality.

Two Ears of this Selection contained respectively 67 and 64 grains.

This Selection was estimated to produce 50 bushels per acre upon poor burning soil at our Seed Farms in 1887.

N.B.—The Beard of the male parent generally drops as the Ear matures (*see Illustration*).

Price 21/- per Bushel of 63 lbs.

*Offered so long as stock lasts. All orders executed in strict rotation.*

# NEW CROSS BRED WHEAT.

## CARTERS' HUNDREDFOLD.

### (SELECTION A.)

Colour and Quality of Grain	...	...	Pale brown red, even.
Length of Straw (with Ear)	...	...	Plump and translucent.
Average Length of Ear	...	...	54 inches.
Colour of Chaff	...	...	6 inches.
Average Period of Ripening on Clay Loam Soil	...	...	End of July.
Parents	...	...	<i>Carters' Royal Prize Red and Challenge White Wheats.</i>

### GENERAL CHARACTERISTICS.

This is an early Wheat.

Sixty Ears, more or less fully developed, were counted on a plant of this variety in 1887. It is exceedingly productive, Ears very long and well filled, habit erect.

It is considerably earlier than either parent, and is very hardy. Straw medium length, stout, and strong; crop very level in general appearance, and does not usually go down in wet seasons.

Two Ears of this Selection contained respectively 80 and 65 grains.

It was estimated to produce 6 quarters per acre upon poor burning soil at our Seed Farms in 1887.

### ABSOLUTELY FREE FROM RUST, 1890.

J. POPE LORD, Esq., Grantham, writes: "The quality is very good, it is quite free from smut or rust, and better quality than others; full crop from 48 to 54 bushels per acre."

C. LAMB, Esq., West Hartlepool, writes: "I estimate the produce of Carters' New Cross Bred Wheat ('Hundredfold') will be 60 bushels per acre, while Scoleby's Squarehead will be 42 to 50 bushels per acre. The straw is bright and good, suitable for thatching."

F. B. NEWITT, Esq., Kettering, writes: "Carters' Cross Bred Wheat, 'Hundredfold,' answers well; I had it reaped, and the man who cut it said he never reaped such heavy sheaves before."

"I think there is not less than 48 bushels per acre; the usual average about here is 36 bushels. Straw very good both in quality and quantity."

"I consider it worth on the market 2/- more per quarter than Squarehead. It is very robust, and tillers well."

Price 21/- per Bushel of 63 lbs.

*Offered so long as stock lasts. All orders executed in strict rotation.*

CARTERS'  
HUNDREDFOLD.

PLATE 10

PROGRESS

MAP

CARTERS'  
STAND-UP.

FEMALE

PROGENY

MAL

A PHOTOGRAPH FROM NATURAL SPECIMENS, EXACT SIZE.

# NEW CROSS BRED WHEAT.

## CARTERS' STAND-UP.

### (SELECTION G.)

Colour of Grain	...	...	<i>Pale opaque amber, bold, even.</i>
Length of Straw (with Ear)	39	inches.	
Length of Ear	...	...	<i>4½ inches.</i>
Colour of Chaff	...	...	<i>Pale stone white.</i>
Average Period of Ripening on Clay Loam Soil	...	...	<i>End of July.</i>
Parents	...	...	<i>Square-headed and Mammoth White Wheats.</i>

### GENERAL CHARACTERISTICS.

This has proved to be the shortest-strawed Wheat in a trial we have made of some 150 varieties.

Habit erect; straw exceedingly stout and strong, resisting the heaviest storms of wind and rain without being "layered" or broken down. Grain firmly set, and is not easily shaken out. Very prolific, and likely to prove useful upon poor, cold clay soils, where other varieties of Wheats cannot be satisfactorily cultivated. We feel too much cannot be said in favour of this variety as a level, heavy-cropping, and fine-constitutioned Wheat.

Two Ears of this Selection contained respectively 68 and 62 grains.

This Selection was estimated to produce 58 bushels per acre upon poor burning soil at our Seed Farms in 1887.

Recommended for early Spring as well as for Autumn sowing.

"This is the Tom Thumb of the wheat family, although both parents were of full height. . . . It is a short wheat, incapable of being laid in wet seasons."—*Daily Chronicle*.

### PRACTICALLY FREE FROM RUST, 1890.

JOHN ROWLI, Esq., Bury, writes: "I am very pleased with the appearance of your New Cross Bred Wheat, 'Stand-up.'"

W. FOWLER, Esq., Exton, writes: "Your Cross Bred Wheat, 'Stand-up,' is quite satisfactory. It came in about the same time as the Squarehead, and before Mountain Wheat. The straw was short, stiff, and upright; and this is the sort I feel convinced we must try to cultivate where the crop is liable to get lodged, and, I think, a sort specially suitable to the Fens. The market value is some shillings more per quarter, compared with older varieties. I form a very favourable opinion of this new variety. It is something like the Squarehead, but has a shorter straw. It is perfectly free from rust, whilst the Mountain Wheat alongside of it, and sown the same day, is very rusty. Grain is very choice indeed."

A. HOWARD, Esq., Meldreth, writes: "I am quite satisfied with Carters' New Cross Bred Wheat. I plucked one ear with 75 grains ('Stand-up'). It stands quite erect, while the other Wheat by the side of it is mostly down."

Price 21/- per Bushel of 63 lbs.

Offered so long as stock lasts. All orders executed in strict rotation.

# NEW CROSS BRED WHEAT.

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## CARTERS' FLOURBALL.

### (SELECTION H.)

Colour and Quality of Grain ... *Deep buff amber, red and paler red.*

Length of Straw (with Ear) ... *58 inches.*

Length of Ear ... ... ... *5 inches.*

Colour of Chaff ... ... ... *Smooth white.*

Average Period of Ripening on Clay Loam Soil ... *Third Week in July.*

Parents ... *Carters' Fillmeasure White and Square-headed Red Wheats.*

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### GENERAL CHARACTERISTICS.

Fine coloured straw, considerably longer than either parent, habit erect; the Ears are also longer. In shape of Ear, colour of grain, and habit of growth, the character of the male parent prevails.

This is one of the earliest Wheats, whilst the quality of the grain is pronounced by Mark Lane men to be excellent.

A peculiarity of this Selection is that the grain is varied in colour, *i.e.* both red and pale-coloured berries are to be found in the same Ear, and we have reason to think this peculiarity will prove to be permanent.

Recommended for early Spring as well as for Autumn sowing.

Two Ears of this Selection contained respectively 70 and 63 berries.

### ABSOLUTELY FREE FROM RUST, 1890.

J. POPE LORD, Esq., Lincolnshire, writes: "A full crop of Carters' New Cross Bred Wheat, 'Flourball,' would have shown 48 to 54 bushels per acre. The straw is medium, the crop is quite clean and free from rust or smut, and the quality better than others."

Price 21/- per Bushel of 63 lbs.

*Offered so long as stock lasts. All orders executed in strict rotation.*

CARTERS'  
FLOURBALL.

FEMALE

PROGENY

MALE

A PHOTOGRAPH FROM NATURAL SPECIMENS, EXACT SIZE.

CARTERS'  
PRIDE OF THE MARKET.

FEMALE

PROGENY

MALE

A PHOTOGRAPH FROM NATURAL SPECIMENS, EXACT SIZE.

# NEW CROSS BRED WHEAT.

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## CARTERS' PRIDE OF THE MARKET.

### (SELECTION J.)

Colour and Quality of Grain ... ... ... *Pale amber red.*

Length of Straw (with Ear) ... ... ... *57 inches.*

Length of Ear ... ... ... ... *6 inches.*

Colour of Chaff ... ... ... ... *Creamy white.*

Average Period of Ripening on Clay Loam Soil ... *Third Week in July.*

Parents *Smooth White Chaff Club-headed Red & Hunter's White Wheats.*

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### GENERAL CHARACTERISTICS.

A very distinct Wheat, habit erect. A striking peculiarity in this Wheat consists in its being one of the last to thrust the Ear from the sheath of the stem, and one of the earliest, next to "Earliest of All," to mature.

The seed-vessels are packed very close. The "cross" favours the male in length of straw, colour of Ear, and appearance of grain, which is pronounced by practical judges to be of high milling quality.

Pale lemon straw, long and strong; Ears close-set, not liable to shell the grain.

Two Ears of this Selection contained respectively 59 and 59 grains.

Mr. LEONARD PATTERSON, Henel Hampstead, says: "The quality of 'Pride of the Market' is excellent."

Price 21/- per Bushel of 63 lbs.

*Offered so long as stock lasts. All orders executed in strict rotation.*

# NEW CROSS BRED WHEAT.

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## CARTERS' BIRDPROOF.

### (SELECTION K.)

Colour and Quality of Grain ...	<i>Pale amber, full handsome berry.</i>
Length of Straw (with Ear) ...	<i>55 inches.</i>
Length of Ear ... ... ...	<i>5 inches.</i>
Colour of Chaff ... ... ...	<i>Stone white.</i>
Average Period of Ripening on Clay Loam Soil ...	<i>End of July.</i>
Parents ...	<i>Carters' Fillmeasure and Mammoth White Wheats.</i>

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### GENERAL CHARACTERISTICS.

Very distinct, habit erect, the apex of the chaff being furnished with a sharp, strong, pointed awn, of such a character as to render it less assailable by birds — hence its designation, "Birdproof."

Long yellowish-white straw, stout and strong; ears very close set, not liable to shell the grain.

Two Ears of this Selection contained respectively 61 and 60 grains.

"It was curious to observe that attempts were being made, and it seemed successfully, to breed varieties with close-set, sharply-pointed glumes, sufficient to keep intruders at bay." — *Gardeners' Chronicle.*

N.B.—The Beard of the male parent generally drops as the Ear matures.

W. HANNAN, Esq., Corby, Lincolnshire, writes: "I estimate my crop of Carters' New Cross Bred Wheat, 'Birdproof,' at 40 to 50 bushels per acre (average previously, 32 bushels). My crop was cut a full week before any other kind in the neighbourhood."

Price 21/- per Bushel of 63 lbs.

*Offered so long as stock lasts. All orders executed in strict rotation.*

CARTERS'  
BIRDPROOF.

FEMALE

PROGENY

MALE

A PHOTOGRAPH FROM NATURAL SPECIMENS, EXACT SIZE.

CARTERS'  
ANGLO-CANADIAN.

SELECTED

PROGENY

ANGLO-CANADIAN

A PHOTOGRAPH FROM NATURAL SPECIMENS, EXACT SIZE.

# NEW CROSS BRED WHEAT.

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## CARTERS' ANGLO-CANADIAN.

### (SELECTION I.)

Colour and Quality of Grain ... *Pale red, long, plump, and even.*

Length of Straw (with Ear) ... *57 inches.*

Length of Ear ... ... ... *7 inches.*

Colour of Chaff ... ... ... *Pale buff brown.*

Average Period of Ripening on Clay Loam Soil ... *Third Week in July.*

Parents ... ... *April Red and Golden Grain Amber Wheats.*

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### GENERAL CHARACTERISTICS.

A bearded Wheat, habit semi-erect, perfectly hardy and **very early**; in some respects resembling in appearance the Kubanka and Saxonka Russian Wheats, but more productive than either of the foregoing.

A most valuable Wheat for late Spring as well as for Autumn sowing. Pronounced by well-known authority to be a great advance, and destined to be the Spring Wheat of the future for England, Canada, Russia, and wherever late Spring sowing is practised.

Long, stout, pale yellow straw; very productive; grain of fine quality.

Two Ears of this Selection contained respectively 67 and 60 grains.

This Selection was estimated to produce 48 bushels per acre upon poor burning soil at our Seed Farms in 1887.

"The selection from this crossing is distinctly earlier than either parent, and it in many respects bears a resemblance as a bearded wheat to the Russian varieties, Kubanka and Saxonka."—*Bell's Weekly Messenger.*

**ABSOLUTELY FREE FROM RUST, 1890.**

Price 21/- per Bushel of 63 lbs.

*Offered so long as stock lasts. All orders executed in strict rotation.*

## HYBRID WHEAT.

*From "THE TIMES," September 5th, 1885.*

MORE than thirty years may be counted since any known experiments were made in this country in the so-called hybridisation of cereals with the view of obtaining new and more valuable varieties. High importance, therefore, attaches to a feat of the present harvest which has been accomplished by Messrs. Carter and Co., of High Holborn. This is the production of veritable novelties in wheat by crossing some of the finest kinds hitherto resulting from selection. Entirely new sorts have now been developed; and these ought properly to be described as "cross bred" rather than "hybrid" wheats. The cross breeding of cereals involves a delicate operation, demanding the skill and judgment of an expert. These interesting operations are being prosecuted at Messrs. Carters' experimental grounds, Forest Hill. And, so far, the results have proved as gratifying to these capable experimenters as they are valuable to the agricultural world. It was observed at a very early stage of growth that in some cases the hybrid or offspring partook of the creeping and drooping form of the male parent instead of the upright habit of growth of the female. Later it was seen that in some of the wheats the offspring had the smooth chaff of the male, instead of the peculiar woolly chaff of the female which had been employed in producing it. These results are repeated in the crops of the present harvest; and we have had opportunities of verifying the observations both at the time of the wheat coming into ear, again when ripe for gathering, and further, when threshed or, rather, rubbed out by hand.

In one instance (No. 19 of the experimental triple-rows) the female parent is a short-strawed, velvet-chaffed wheat, and the male a very large bearded and tall American variety. The offspring is about a foot taller than the female parent, the chaff is more or less smooth, and the thick ears bear minute awns at the apex of the chaff of each grain. These points in serrated order from top to bottom of the tier of sets

having been observed to be obnoxious to sparrows, this new variety of wheat has been distinguished by the name "Bird-proof." In No. 13 the female parent is the well-known early kind Talavera, and the male parent the Royal Prize Red. We are able to confirm Messrs. Carters' observation that, in this case, the offspring ripened and was ready for harvesting fully fourteen days before either parent—a peculiarity observed both last year and in the present season. It may, therefore, be expected that this new variety will prove of especial service for sowing in those countries where the seed time is in spring and earliness is an important consideration. The ears are much finer and the grain appears to be greatly superior as compared with the Royal Prize Red, and a fortnight earlier than that variety. As English millers are said to mix certain proportions of red wheat with imported white for the purpose of giving strength to the flour, Messrs. Carter have sought to blend together the qualities of red and white in one progeny; and as only such varieties as are already known and liked by millers have, in most of the experiments, been the parents employed, it may be anticipated that high milling value will distinguish the offspring wheats.

Among noticed peculiarities of the new wheats, some exhibit in a high degree firm setting of the grain, or non-liability to be shaken out by winds—a desideratum for New Zealand wheat-growers, who are accustomed to leave the crop until dead ripe before taking off the ears with a "stripper." Another new sort is remarkable for the short, thick, and strong nature of the straw, bidding fair to defy any weight of rain to lodge it, and being especially adapted for poor, cold, or wet soils.

A very important feature of the experiments is the remarkable vigour and productiveness of one and all of the hybrids as compared with the parents, the cultivation being the same for all.

## CARTERS' NEW CROSS BRED WHEATS.

*From "THE MORNING POST," August 17th, 1886.*

ONLY those who are able to judge of the extent of the trials and experiments made by individual firms for the purpose of the improvement of farm machinery, plant life, or animal form and power, have the power of judging how much we owe in the aggregate to commercial enterprise and careful competition, in the production of "the best." Certainly it exceeds all that any Government station has ever done. A few weeks ago we described some most elaborate experiments in grass management, and now we are able to report a series of most interesting trials and experiments, and some that are likely to have a most important bearing on the future of our agriculture. Both of these series are being carried out on the trial grounds belonging to Messrs. James Carter & Co. The first of these trials refer to the breeding of new varieties of wheat, and the second to the growth of tobacco in this country.

The production of new wheats has been perhaps one of the most popular works of the scientist for many years, and years ago Mr. Patrick Sheriff described in the *Journal* of the Royal Agricultural Society the results of a number of such experiments. But hitherto the work done has been rather that of selection than of actual crossing of varieties of distinct characteristics. There is no doubt on the question that this selection of corn has resulted in a great improvement in our varieties, and it may be said almost as a truism that crops grown from seed of a pedigree character, and from a long course of selection, produce crops that are far superior to those grown from seed carelessly selected. But to the vegetable physiologist plants offer a much wider scope of work than is shown in mere improvement by selection. In the harvest field the best grain can be "selected" by any one, and intelligent labour even is not a necessity. Crossing of breeds by hybridisation, on the other hand, is a delicate and scientific work, and one that requires not only all the patience and care of careful training, but a deep knowledge of botanical physiology, and the guidance of an accurate mind. It is this that makes the five years' experiments in wheat hybridisation at Messrs. Carters' nurseries so interesting and instructive. During the whole of this period crosses have been made between the different varieties, and yet it is only just now that the actual results are beginning to be apparent. Even if they had no permanent value to our agriculture, it would have been of

interest to have watched the actual results of the delicate crossing of varieties. The crosses are numerous, but it is not all that are successful. One is a cross, for instance, between the square-headed smooth chaff (female) and the American bearded. The result of the cross—though both the parents are strong and tall—is one of the shortest wheats we have ever seen, being only about 18 inches high. The straw is thick and very stocky, and the variety would, perhaps, do well for very wet soils, on which tall straw crops are inevitably laid. But for best wheat lands it would be more curious than profitable. It is the unlooked-for results of crosses of this kind that give interest to the work, and provide us with curious problems in breeding. But it must not be thought for one moment that the results are only of the "curious" order, for in nearly all the cases the result of the cross is not only a combination of the special characteristics of the two parents, but the new varieties are stronger in plant, longer and fuller in ear, and earlier to mature than the parents. As a rule red and white wheats have been crossed, and the produce is generally very translucent and of a light amber colour. The object of this cross is to provide a wheat that will avoid the necessity for the mixing of the two varieties for milling purposes.

A second lot of experiments relate to last year's hybridisations, and, speaking generally, the same results are here apparent. What bids fair to be an exceedingly early variety is a cross between Talavera and Bird-proof, the straw of this being fine and ears short, but squarer and better filled than Talavera. One between Club-headed and Hallett's Pedigree gives a variety that is exceedingly heavy in the ear and with fine long straw.

Leaving these experiments we come to a most interesting series of plots, being nothing more or less than trials of every variety of wheat brought into Mark Lane from abroad. A wretched lot they are, with scarcely a good variety among them. Those who are aware of the poor agriculture, which is content with from 10 to 15 bushels per acre, will not be astonished at seeing the unimproved plants by which it is achieved. But the contrast between the latest perfection in the wheat plant, as shown on the hybridisation plots, and these stunted plants, is of itself a lesson as to what "the best" in agriculture really is.

CARTERS' ROYAL PRIZE is a distinct and decided advance upon Golden Drop. Ear longer, better filled, a more certain cropper, and with longer straw.

# Carters' "Royal Prize" Red Wheat.



CARTERS' ROYAL  
PRIZE RED WHEAT.  
(FRONT VIEW.)



A FIELD OF CARTERS' ROYAL PRIZE RED WHEAT.

THE OFFICIAL STATEMENT FROM THE  
*Journal of the Royal Agricultural Society*  
 SHOWS THAT IN ALL BUT ONE INSTANCE  
**CARTERS' ROYAL PRIZE VARIETY**  
 POSSESSED THE  
Greatest Money Value both for Grain and Straw  
 OF THE RED WHEATS.

The straw is remarkably stout, and the wheat does not "layer" in wet weather. From the peculiar formation of the ear, the grain is not readily knocked out by the wind if meant when ripe. This latter merit in our opinion renders Carters' Royal Prize Red Wheat a valuable acquisition for Colonial use.

This red wheat will be found of ready value to millers for grinding with imported white grain.

As will be seen by the Engraving above, we do not claim for this Wheat impossible size of ear; but for general productiveness, hardiness, strength and quality of straw, milling value of grain, and other excellencies, we consider it very superior.



CARTERS' ROYAL  
PRIZE RED WHEAT.  
(SIDE VIEW.)

Present price per Bushel, 10s. 6d.; per Quarter, 80s.

Five per cent. discount for Cash in 14 days, or 3 months' Credit, net.

Good Working Sacks, 1/- each, not returnable.

ALL PARCELS CARRIAGE FREE.

**C**ARTERS' ROYAL PRIZE RED has again stood erect and firm in the straw during the past stormy season, when nearly all other varieties of Wheat have been more or less layered.

CARTERS' SEED WHEATS, STANDARD SORTS,  
ALREADY IN COMMERCE.

**CARTERS'**  
**"ROYAL PRIZE" RED WHEAT,**  
**THE ONLY RED WHEAT**  
 AWARDED A  
**SILVER MEDAL**  
 BY THE  
**ROYAL AGRICULTURAL SOCIETY OF ENGLAND,**  
 For Superiority of Produce.

CARTERS' ROYAL PRIZE RED.—The straw is of medium length, stout, and the wheat is not liable to "layer" in wet weather. From the peculiar formation of the ear, the grain is not readily knocked out by the wind if uncut when ripe ... ... ... ... 10 6 80 0

**In YORKSHIRE.**

"I was very pleased with Carters' Royal Prize Red Wheat. I think it one of the best Redes."

Mr. J. BOULTON, Ferrybridge.

**In NORTHAMPTON.**

"Both myself and friends are very pleased with Carters' Royal Prize Red Wheat."—S. HURRY, Esq., Thorney.

**In HAMPSHIRE.**

"Last year I grew 92 sacks on 6½ acres, weight 65½ lbs. per bushel. I am very pleased with this wheat."

G. KENDLE, Esq., Agent to The Right Hon. Lord MOUNT-TEMPLE.

CARTERS' IMPROVED "VELVET CHAFF WHITE FILLMEASURE."—A desirable change of Seed for clay soils; stout medium straw, early ripening, extra long square heads. Fine hard white grain, close set ... ... ... ... ... ... ... ... 10 0 75 0

**ALL OFFERED SO LONG AS STOCK LASTS.** Good Working Sacks, 1s. each, not returnable.

**ALL PARCELS CARRIAGE FREE.**

**SPECIAL NOTICE.**

The above varieties of Seed Corn being thrashed by Steam Machinery, we cannot undertake any responsibility as to the produce or purity. It is offered and sold on these conditions only, and if the bulk when delivered is not approved, it must be returned to us at once, Carriage Paid.

\* CARTERS' ROYAL PRIZE RED has again stood erect and firm in the straw during the past stormy season, when nearly all other varieties of Wheat have been more or less layered.

# EARLY SPRING KEEP.

*IMPORTANT TO GRAZIERS AND FLOCKMASTERS.*

## Substitutes for failing Clover & Grass.



If a sowing is made of the following Mixture at the rate of  $2\frac{1}{2}$  to 3 Bushels per acre, either upon freshly ploughed land, or well harrowed in upon early cleared corn stubble, a valuable addition to the Spring Food Crop will be secured, or should the Autumn prove favourable, a useful crop for consumption as a change of food may be available before the end of the year.

The mixture comprises the most Rapid Growing Grasses, Trifoliums, and Clovers, and is suitable for sowing in any district south of a line drawn through the centre of the County of York.

Price 11/6 per Bushel. Carriage Free.

Sow  $2\frac{1}{2}$  to 3 Bushels per acre to Form a New Crop.

*For Districts north of the middle of the County of York we prepare a Special Mixture, comprising the Hardier Varieties of Grasses and Clovers. Price 11/6 per Bushel. Carriage Free.*

DEFICIENT CLOVERS OR LEYS WILL BE GREATLY BENEFITED BY THE APPLICATION OF ONE BUSHEL OF CARTERS' AUTUMN MIXTURE PER ACRE.

**HOW THE SEED SHOULD BE SOWN.**—On corn stubble harrow the land to make a suitable bed for the seed; then sow, and harrow again in a cross direction with the object of covering the seed. Roll well afterwards, as the whole of the seeds delight in a firm bed, and many young plants perish from a want of this tenacity in the condition of the land.

On newly broken up land the same treatment is recommended, even greater importance being attached to the subject of thorough rolling, so as to form a firm, even, and close seed-bed.

*As far as possible we use only New Seeds for these Prescriptions.*

**CARTERS' ROYAL PRIZE RED** has again stood erect and firm in the straw during the past stormy season, when nearly all other varieties of Wheat have been more or less layered.

# TRIFOLIUM.

Readers of Carters' "Essay upon Grasses and Grass Lands" will remember we state that Trifolium may be safely sown south of the Yorkshire Wolds.

As a stubble-plant, sown either alone or with Rye Grass, after the corn crop is removed, Trifolium has no equal. It will produce an enormous crop very early in the following Spring, suitable either for consumption as green food or for hay. All kinds of stock eat it freely.

Upon imperfect clover-leys and other crops intended to produce green Spring food, but that may be deficient in plant, the Trifolium is invaluable, by reason of its remarkably rapid Spring growth and abundant productiveness.

The Trifolium was originally introduced from Italy, and for some years it was only known as a cultivated garden-plant, the bright crimson flower being exceedingly pretty.

N.B.—There are also other Varieties of later introduction—*i.e.*, Late Red Trifolium and Late White Trifolium, both of which are useful to sow in smaller proportions to produce successional crops after the first-named has been consumed.

Sow 24 to 36 lbs. per acre (alone), or 18 to 20 lbs. if with Italian Rye Grass Seeds.

	Present Price (not binding).	Per lb.
EARLY RED ...	... ... ... ... ... ... ... ...	Price 4d. to 5d.
LATE RED ...	... ... ... ... ... ... ... ...	per cwt. 5d. to 6d.
LATE WHITE ...	... ... ... ... ... ... ... ...	on application. ... 6d.

## EARLY ORDERS RECOMMENDED.

## REASONS WHY

### Every Farmer should grow a few Acres of ITALIAN RYE GRASS.

It will give an earlier and more certain Spring Green Crop than anything else we know of.

In the early Spring it produces magnificent swarths of rich nutritious Green Food during the bitterly cold north-east winds of April and May, and when the growth of other Crops is more or less checked.

Italian Rye Grass is very nutritious, is eaten greedily by all kinds of stock, and, although very succulent, has the advantage of not scouring them. By its use a large number of stock may be kept upon a comparatively limited space of ground.

It is especially suitable for dairying, as securing through about nine months of the year a constant supply of succulent food.

Cows will generally consume about 100 lbs. a day, with more or less corn or cake; fattening beasts require about the same quantity, with rather more corn or cake; sheep will eat from 10 lbs. to 15 lbs. a day.

Italian Rye Grass may be sown until late in Autumn at the rate of 4 bushels per statute acre. If sown early in Autumn it will often give a cut before Winter, whilst as a change of food for early Spring feeding by ewes and lambs it is invaluable.

Italian Rye Grass may also be sown with Trifolium incarnatum (Crimson Clover) at the rate of 2 bushels of the former and 18 to 20 lbs. of the latter per acre.

The ground should be well prepared by the application of as much farmyard manure as the plough will turn under.

**CARTERS' SUPERFINE EVERGREEN ITALIAN RYE GRASS** Price per Quarter 6s.

**GOOD CLEAN ITALIAN RYE GRASS** ... ... ... of 8 Bushels on application. 5s. 6d.

Sow 4 Bushels per acre, and well roll afterwards.

*The Autumn is a Favourable Time to Lay Down Land to Grass,  
AND UNDER PROPITIOUS CIRCUMSTANCES  
A SEASON IS SAVED.*  
PRESENT PRICES—NOT BINDING.

**Permanent Grass and Clover Seeds  
OF GUARANTEED QUALITY,  
SPECIALLY PREPARED  
FOR PERMANENT PASTURES,  
FROM  
MESSRS. CARTERS' OWN PRESCRIPTIONS.**

Reduced Rates charged for more than 10 acres.	BEST QUALITY, WITH Rye Grass. Present price per acre.	Best Quality, WITHOUT Rye Grass. Present price per acre.	Useful Quality, with Rye Grass. Present price per acre.	Third Quality, with Rye Grass. Present price per acre.
FOR HEAVY SOILS	30/- to 31/6	34/- to 39/-	24/- to 25/-	18/6 to 21/-
FOR MEDIUM SOILS	31/- to 31/6	36/6 to 37/6	24/6 to 25/-	18/6 to 21/-
FOR LIGHT SOILS	31/- to 31/6	37/- to 38/6	24/6 to 25/-	18/6 to 21/-

**MISCELLANEOUS SEEDS, etc., for Autumn Sowing.**

Present Prices (not Binding). Per Bushel. Per lb.	Present Prices (not Binding). Per Bushel. Per lb.
Winter Tares.—A fine sample ... — —	Broad-Leaved Essex Rape ... 14/- 4d.
Mustard Seed.—Clean samples 12/6 to 15/- 4d. to 4½d. (of tested growth.)	Common Rye ... ... ... 5/- — Prickly Comfrey Roots, Strong Sets per 100, 10/-

**Carters' Renovating Mixture for  
Improving Old Grass Lands.**

This Mixture is calculated to give very beneficial results if sown at once during suitable opportunities at the rate of 12 to 20 lbs. per acre. Full Instructions for sowing with every parcel of seed.

Per cwt. Per lb.  
CARTERS' RENOVATING MIXTURE—With Rye Grass, choicest guaranteed quality 80s. 9d.  
CARTERS' RENOVATING MIXTURE—Without Rye Grass, choicest guaranteed quality 105s. 1s.  
CARTERS' RENOVATING MIXTURE FOR PARK GROUNDS ... ... ... ... 130s. 1/3  
CARTERS' CHEAP RENOVATING MIXTURE for Marshes and Poor Lands, where an  
economical application is desired ... ... ... ... ... ... ... ... ... 52s. 6d.

**CARTERS'**  
**Autumn Mixture for Stack Ensilage.**

1½ BUSHEL OF WINTER TARES.	
½ " CARTERS' PRIZE PROLIFIC RYE.	
½ " BEANS.	
½ " OATS.	

3 BUSHELS PER ACRE.

The above Mixture is equally valuable for Cutting for Spring Feeding.

*We are favoured with the following useful information by the Winner of our Champion Cup.*

As a change for the land a crop of Oats cut green may be substituted; autumn-sown, which is generally the heaviest crop, is ready to cut in May to end of June. This system is a great boon to the strong-land Farmer, whilst the foregoing crop is adapted to almost all descriptions of soil. You may unhesitatingly recommend it. The cattle are simply mad over it, and thrive and fatten upon it in a manner beyond belief.

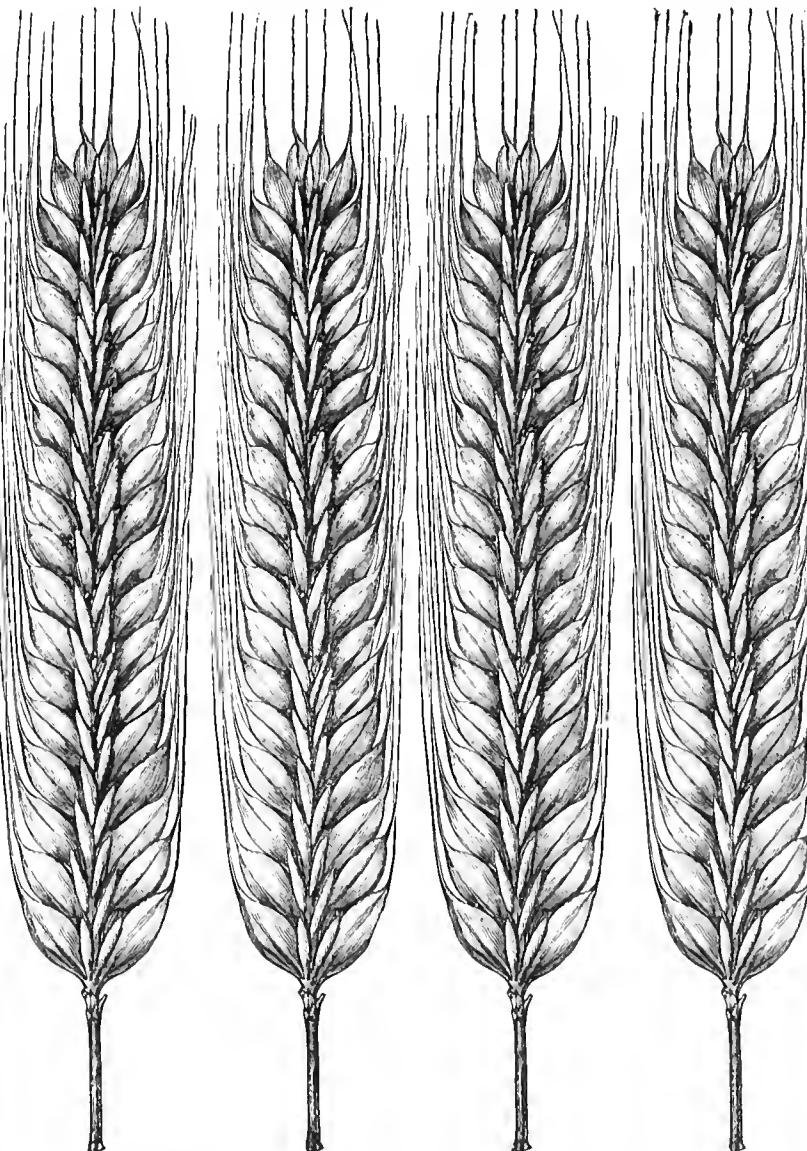
**Conditions of Guarantee of Quality.**—We guarantee our Seeds according to the quality purchased to be of the highest average standard of vitality of the season, and it is open to the purchaser to confirm this by submitting the samples to professional analysis at his own expense. We cannot, however, be in any way responsible for the produce of Seeds sold under this guarantee, or for errors of description, and it must therefore be clearly understood that our responsibility ceases upon the final acceptance of the goods.

We can supply this Mixture.  
PRESENT PRICE  
24/- PER ACRE.  
Carriage Free.

# CARTERS' "GOLDTHORPE" BARLEY.

Introduced for the First Time by us in 1889.

AWARDED THE FIRST PRIZE, BIRMINGHAM.



In HEREFORDSHIRE.—"Carters' Goldthorpe Barley gave great satisfaction, an extraordinary sample having made 23s. per 14 scores, being about 2s. a sack more than any one has made about here."

Mr. R. G. GWILT, Leintwardine.

In GLOUCESTER.—"I am pleased to say I like Carters' Goldthorpe Barley; it was my best, and fetched most money per quarter."—Mr. J. HART, Kings Cotle.

In ESSEX.—"My crop of Carters' Goldthorpe Barley was considered a fine piece."—Mr. G. JOHNSON, Lawford.

The Goldthorpe Barley originated some seven years ago upon a farm in Nottinghamshire. A single ear was found in a crop of Chevalier, attracting attention by reason of its closely-packed, even-grained appearance, as well as by the length of the straw and robust character of the plant from which it sprang. The Goldthorpe Barley has been carefully re-selected each year up to the present date, the handsome appearance of the crop securing admiration from all who saw it. It is distinct from the Spratt, Archer, or Beardless Barleys, and the grain is of first-rate malting quality.

*The Goldthorpe Barley is remarkable for stout long straw, rendering it less liable to layer in rainy weather than other Barleys; it ripens forward on strong land, and the grain is very level, and of fine texture.*

In HERTS.—"I am very pleased with Carters' Goldthorpe Barley."—Mr. T. L. ORCHARD, Westbrook Hay.

In WILTS.—"Carters' Goldthorpe Barley answered very well; owing to the stiffness of the straw it was not laid, like the rest of my crops, and ripened more evenly."

Mr. G. LONG, Ogbourne.

In YORKS.—"I consider Carters' Goldthorpe Barley will stand the wet weather when other varieties fail. My Kinner Barley was down the first bad weather."

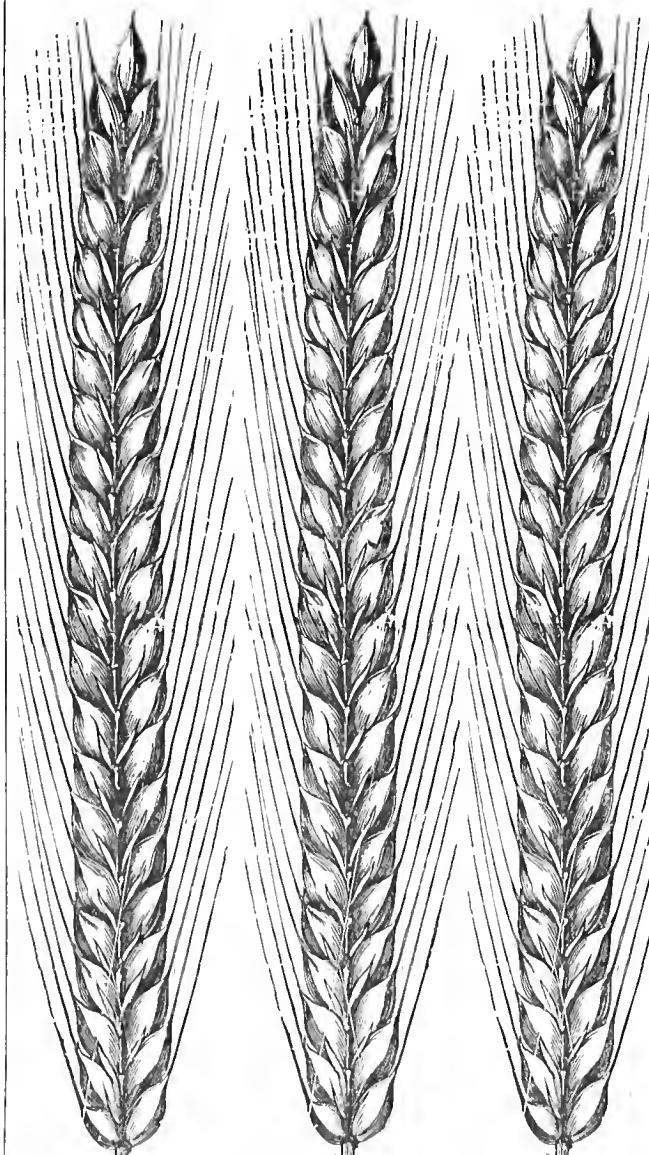
Mr. J. HUTCHINSON, Kellington.

Price 11/6 per Bushel; 84/- per Quarter. Sow 5 to 7 Pecks per acre.

# CARTERS' PRIZE PROLIFIC BARLEY.

THE BEST LONG-EARED BARLEY IN CULTIVATION.

Awarded the First Prize and the Second Prize at the Windsor Show  
of the Royal Agricultural Society of England.



Won First Prize, Windsor,	1889.
Won Second Prize, Windsor,	1889.
Won First Prize, Norwich,	1889.
Won Second Prize, Norwich,	1889.
Won First Prize, Paris Exhib., 1878.	
Won First Prize, Amsterdam, 1884.	
Won First Prize, Birmingham, 1887. <small>(Beating First Prize Variety at Brewery Exhibition)</small>	
Won First Prize, Aylesbury,	1888.
Won First Prize, Watford,	1888.
Won First Prize, Croydon,	1889.
Won Second Prize, Croydon,	1889.
Won First Prize, Guildford,	1889.
Won Second Prize, Guildford,	1889.
Won Second Prize, Brewery Ex., 1889.	
Won First, Second, & Third Prizes, Norwich, 1888.	
Won Second Prize, Brewery Ex., 1887.	
Won Second Prize, Norwich,	1887.
Won Third Prize, Norwich,	1887.

PRICE 11s. 6d. PER BUSHEL; 84s. PER QUARTER. Sow 5 to 7 Pecks per acre.

REDUCED RATES FOR 5 QUARTERS AND UPWARDS.

# THE BEST MALTING BARLEY

IS

# CARTERS' PRIZE PROLIFIC

(SEE OPPOSITE PAGE).

This magnificent Barley is admitted by all Judges to be the best variety for Malting purposes in cultivation. The superiority of Carters' Prize Prolific Barley has been fully established by winning the First and Second Prizes at the Windsor Show of the Royal Agricultural Society of England, again at Birmingham Show in 1887 (shortly after the Brewery Exhibition) when it was placed "First," the "Second Prize" going to the variety awarded "First Honours" at Islington, whilst at the Norwich Show in 1888, and also in 1889, its success was phenomenal, securing in 1888 the First Prize, Second Prize, Third Prize, and Reserve Number, and the First Prize and Second Prize in 1889—all other varieties in this class being placed in inferior positions by the Judges. Amongst other important awards may be mentioned First Prize and Second Prize, Croydon, 1889, and First Prize and Second Prize, Guildford, 1889.

Carters' Prize Prolific Barley does well on any soil; as shown below, it is an enormous cropper, and by reason of its stout, bright straw, it is less liable to go down in stormy weather. It may be sown thinner than Barleys of less vigorous constitution, 5 to 7 pecks per acre being ample. The long, even golden ears (see Illustration) average 40 grains, and in some instances 44 grains have been counted in a single ear.

27 Quarters of CARTERS' PRIZE PROLIFIC BARLEY from 4 Bushels.  
MESSRS. CARTER & CO.

GENTLEMEN,—I bought 1 sack of your Prize Prolific Barley. With it I sowed 2 acres, and from it I obtained 27 quarters head barley, besides tailings. I was very pleased with the Seed.—E. A. WEDD.

SUFFOLK.—"I have a field of twelve acres of Carters' Prize Prolific Barley, which looks splendid." Mr. E. J. BASS, Eastwood Farm.

SOMERSET.—"Carters' Prize Prolific Barley is much better than any in this neighbourhood; it stood up well during the rough stormy weather." Mr. J. CHIVERS, Tunley.

BEDS.—"Carters' Prize Prolific Barley is better quality by 6s. per quarter than any other I have grown this year, and I believe I have eight bushels more per acre."—Mr. T. COOK, Dunstable.

BUCKS.—"The Barley (Carters' Prize Prolific) I had from you is the finest crop for miles round. I am only sorry I did not put in twenty acres." Rev. G. M. CAPEL.

DEVON.—"Carters' Prize Prolific Barley answers well; it has fetched the best prices for malting Barley around this neighbourhood."—W. R. BAKER, Esq.

HANTS.—"The Barley from Carters' seed is by far the best crop I have, and I am well pleased with it." Mr. J. SIMPSON.

HERTS.—"Carters' Prize Prolific is in my opinion the best Barley in cultivation."—Mr. T. BOWMAN, Ware.

KENT.—"The yield of Carters' Prize Barley was very good, beating another sort by 6 bushels per acre, and yielding 8½ quarters per acre."—R. L. COBB, Esq.

GLOUCESTER.—"I have made the highest price for Barley of any one round this county with Carters' Prize Prolific. Both my employer and myself are greatly pleased with the variety." Mr. H. WESTMACOTT.

LINCOLNSHIRE.—"I have taken the Silver Cup at our Show four years out of five, with Carters' Prize Prolific Barley."—G. WRIGHT, Esq.

SURREY.—"I am well pleased with Carters' Prize Prolific Barley. I drilled three kinds in the same field, and Carters' variety produced two sacks per acre more than the others. I sent a sample to our Show to-day, and was awarded First Prize." A. TICE, Esq.

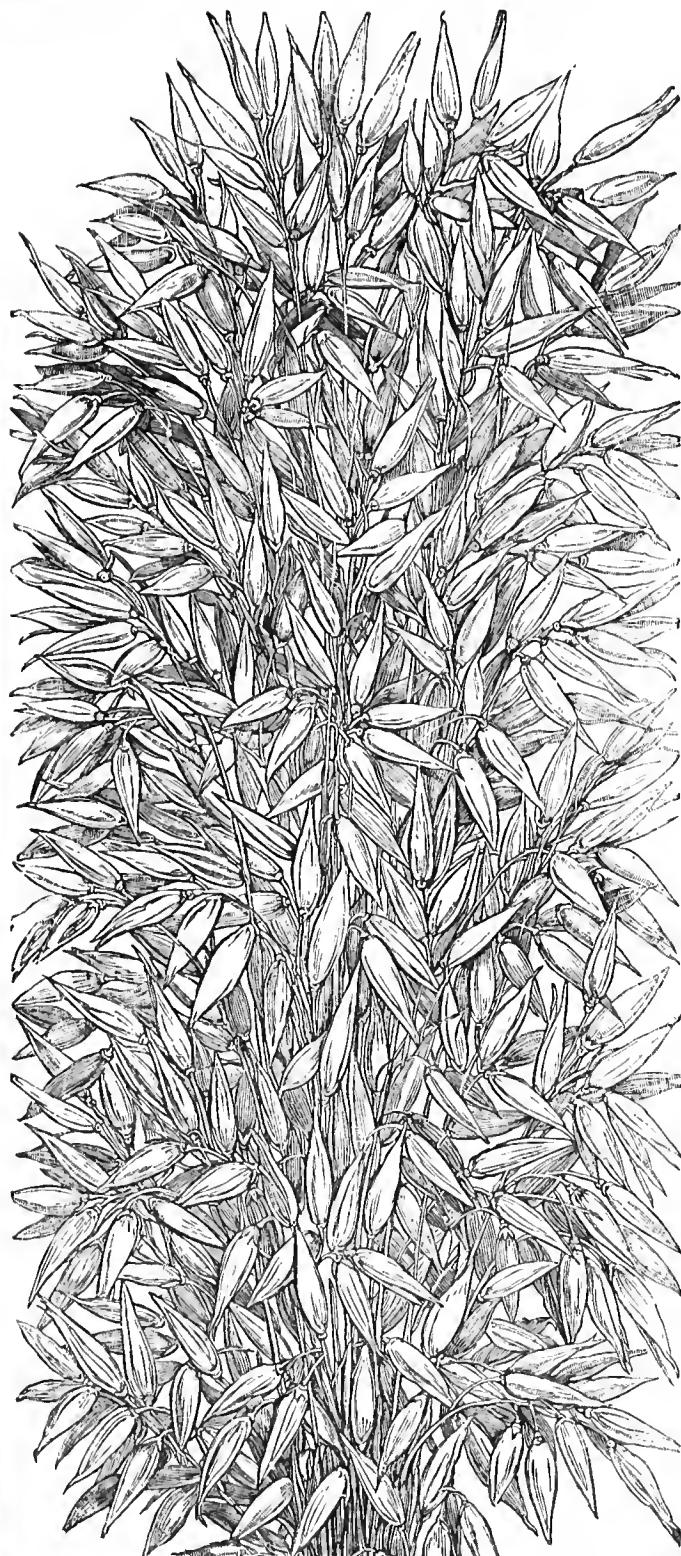
WILTS.—"My Barley (Carters' Prize Prolific) is by far the finest sample in this neighbourhood." W. LONG, Esq.

YORKSHIRE.—"Carters' Prize Prolific Barley has produced a heavy crop of fine quality. I only drilled half the usual quantity per acre."—J. ABBOTT, Esq.

Price 11/6 per Bushel; 84/- per Quarter. Sow 5 to 7 Pecks per acre.

Reduced Rates for 5 Quarters and upwards.

TERMS—CASH WITH ORDER (less 5 per cent.) from new Correspondents. GOOD WORKING SACKS, 1s. each.



## CARTERS' PRIZE CLUSTER OATS.

**The Heaviest, the Earliest, and the Most Prolific White Oat in Cultivation.**

We first introduced this wonderful Oat in 1878, and it is well known that the presence of a magnificent sample in our Seed Corn Group at the Paris Exhibition that year, exercised a considerable influence upon the opinions of the International Jurors, who ultimately awarded us the only Gold Medal given to English Seed Corn.

The Prize Cluster Oat tillers freely, and is less liable to layer in rainy seasons than other varieties.

**SCOTLAND.**—"Send to bushels more of Carters' Prize Cluster Oats, the last I got from you did excellent, and far beyond my expectations."—K. McCONACHIE, Esq.

**NORTHUMBERLAND.**—"Carters' Prize Cluster Oats gave a very heavy crop, and fully a fortnight in advance of any other."—R. SHANKS, Esq.

**MIDDLESEX.**—"I won the £5 5s. Prize at our Agricultural Society, for the best sack of Oats, with Carters' Prize Clusters; as you are aware, I also won it last year."—R. NEWMAN, Esq.

**SHROPSHIRE.**—"Carters' Prize Cluster Oats are the finest ever grown on this farm, and have a very ready sale."—T. K. GARDNER, Esq.

**CUMBERLAND.**—"Carters' Cluster Oats are looking remarkably well, and a great deal superior to our own seed."—Mr. A. CAMPBELL.

**LANCASHIRE.**—"The Oats from Carters' are looking well, and are as forward as others that were sown a month earlier."—E. STANLEY, Esq.

"I have been very much pleased with the crop I had from Carters' Prize Cluster Oats."—H. R. H. GALE, Esq.

**CAMBRIDGE.**—"Carters' Prize Cluster Oats yielded 15 sacks off a little over 3 roods—weighed 13 stones per 4 bushels as they came from the machine, and are the best oats I ever grew."—W. C. BAILEY, Esq.

**IRELAND.**—"As for Carters' Prize Cluster Oats, there is no crop like them in this part of the country."—W. KELLY, Esq.

"The White Oats from Carters' are the best in this County for miles round, and every one admires them."—F. ARCHIBALD, Esq.

"Carters' Cluster Oats exceeded anything ever sown in this locality, both in quality and quantity." I sold £20 worth off an English acre."—Mr. J. JOHNSON.

**YORKS.**—"I was awarded First Prize for a Collection of Grain with Straw, grown from Carters' Seeds. The Oats averaged 320 kernels per ear, with straw nearly 6 ft. long."—B. SPAVEN, Esq.

"I have much pleasure in hearing testimony to the excellent quality and yield of Carters' Prize Prolific Oats. They gave me to quarters to the acre."—Mr. T. WETHERELL.

**SUSSEX.**—"I sowed Carters' Cluster Oats, and the crop is now the most forward I have seen. They are quite a sight. When harvested, the crop produced 20 sacks per acre; weight, 46 pounds per bushel."—A. J. STUART, Esq.

**Price 7s. 6d. per Bushel;  
56s. per Quarter.**

# CARTERS' RE-SELECTED TRIUMPH WHITE OAT.



WE CAN SUPPLY A THOROUGH  
CHANGE OF SEED—again carefully grown  
UPON OUR OWN SEED FARMS, from an  
original 5s. packet purchased by us the first  
season of its introduction into England.

We have proved the Triumph Oat to possess many advantages over ordinary varieties, inasmuch that it is a prodigious cropper, and if drilled thinly—as it should be—the straw is so very stout and strong that the crop will not "go down" or layer, as many other sorts of Oats will do, during the prevalence of violent storms of rain and wind.

The grain is highly appreciated by owners of valuable horses.

## THE TRIUMPH OAT

Has produced Crops ranging from  
**72 to 120 BUSHELS PER ACRE**  
IN ENGLAND.

"I find Carters' Triumph Oats a very good variety to grow. They will produce quite one-third more straw and corn than any I have ever grown before. I shall grow 100 acres of them this year."

(Signed), JOHN D. ROSE.

"The Triumph Oats from Carters' yielded nine quarters from two bushels, and gave one ton of straw more than two other kinds."

Mr. H. DRURY, Stow.

"I have a splendid crop of Triumph Oats from Carters'."

Mr. W. DITCHFIELD, Sutton Heath.

"My Oats from Carters' are the talk of the neighbourhood. They look wonderful."

Mr. A. HISCOCK, Frog Lane Farm.

**Price 7/6 per Bushel; 56/- per Quarter. Sow 2 to 3 Bushels per acre.**

Per Quarter. Per Bushel.

		5	6	7	6
<b>Carters' "Re-selected" Prize Cluster Oats</b>	...	56	0	7	6
<b>Carters' "Re-selected" White Tartarian Oats</b>	52	0	7	0	
<b>Carters' "Re-selected" Black Tartarian Oats</b>	52	0	7	0	

Sow 2 to 3 Bushels per acre. Reduced Rates for 5 Quarters and upwards.

*Cash with Order from unknown Correspondents.*

Carriage paid to Railway Stations in England and Wales, and Ports in Scotland and Ireland having direct steam communication with London.

### PLEASE READ THIS SPECIAL NOTICE.

Our stocks of Seed Corn are selected with every care; but as they are Machine Thrashed, we offer them without guarantee as to purity, and supply them on this condition only. If the bulk is not approved on delivery, it is to be returned to us at once, and not sown, as complaints will not afterwards be entertained.

This Notice applies to all Oats, Barley, Wheat, and all other Seed Corn offered in this List.

# Carters' New Cross Bred Wheats.

"ORDRE DU MERITE  
AGRICOLE."



"ORDRE DU MERITE  
AGRICOLE."



## THE FRENCH GOVERNMENT,

In recognition of the services rendered by us to Agriculture, have conferred  
upon our Firm the

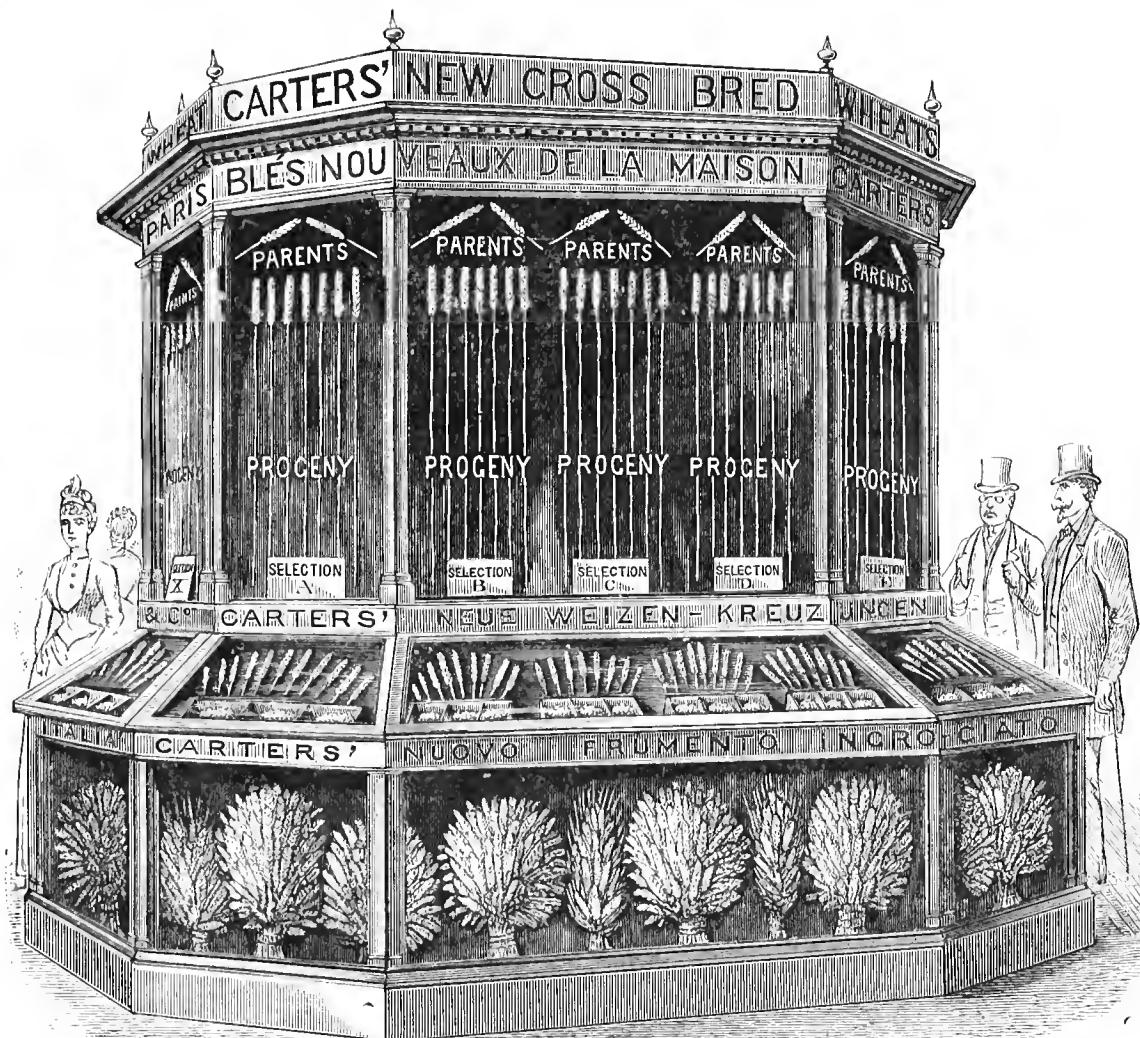
## "ORDRE DU MÉRITE AGRICOLE,"

THE HIGHEST DISTINCTION IN FRENCH AGRICULTURE.

THIS BESTOWAL MARKS ITS FIRST DISTRIBUTION IN ENGLAND.

ALSO  
AWARDED

THE SILVER MEDAL, PARIS EXHIBITION, 1889.  
FIRST CLASS CERTIFICATE AND HONOURABLE MENTION, CAMBRIDGESHIRE AGRICULTURAL SOCIETY.  
FIRST CLASS CERTIFICATE FOR MERIT, NOTTINGHAMSHIRE AGRICULTURAL SOCIETY.  
THE SILVER MEDAL, WARWICKSHIRE AGRICULTURAL SOCIETY.  
THE SILVER MEDAL, WIRRAL AND BIRKENHEAD AGRICULTURAL SOCIETY.



AS EXHIBITED at the INTERNATIONAL EXHIBITION, EDINBURGH, 1890,  
and at the EXPOSITION UNIVERSELLE DE PARIS, 1889.

# CARTERS' NEW CROSS BRED WHEATS.

## OPINIONS

OF

### Eminent Agriculturists and Scientific Authorities.

"The results have been very probably surprising to themselves (Messrs. Carter). Increase of vigour is an added recommendation to all the new wheats. The experiment is little short of national importance. It deserves the widest support from those who grow wheat, and recognition for honours from those who pose as the champions and instructors of agriculturists. It is a fact that all the inclemencies of the season, all the disadvantages of an uncongenial soil and unsuitable site for wheat, have been borne so far (August 25th, 1888) with less damage by Messrs. Carters' newly originated varieties than by any of the most favoured ones brought to pit against them from the Old or the New World, and this means that Messrs. Carters' experiments are a very real success."—*The Field.*

"With regard to Messrs. Carters' Cross Bred Wheats, all plant improvers await their appearance on the market with the greatest interest, not without great hope that an absolute improvement may be accomplished as the result of the first attempt in England at the systematic breeding of wheat."

*Morton's (now Vinton's) Almanac for 1889.*

"There are wheats with short, very stiff straw and large ears well suited for heavy lands; there are others notable for early maturity, and yet others in which the high quality of a delicate wheat has been blended with the hardiness of a more prolific strain."—*The Standard.*

"Certainly in many cases the cross (Messrs. Carters' Cross Bred Wheats) was obvious enough. I saw one plant of sixty good ears ripened beautifully from a single grain."—The late MR. J. CHALMERS MORTON, in *The Agricultural Gazette.*

"A very important feature is the remarkable vigour and productiveness of the hybrids as compared with the parents, the cultivation being the same for all."

The late MR. J. ALGERNON CLARKE, in *The Times.*

"We can testify to the remarkable results, in stature, earliness or lateness, size, shape, colour of ear and grain, and many other points."

DR. MASTERS, in *The Gardeners' Chronicle.*

"The success achieved in each direction has been very marked, as we can testify from a visit to Messrs. Carters' experiments. The Cross Bred Wheats have assumed a permanent character."

MR. TURNER, in *The Mark Lane Express.*

"Messrs. Carters' Cross Bred Wheats present highly successful results."—*The Daily Telegraph.*

"For thirty years nothing of importance has been done in this direction (cross breeding of wheat) until Messrs. Carter took the matter up in earnest, and we are gratified at the very complete success which has resulted from their tedious, unremitting labours."—*Bell's Messenger.*

"As a rule, red and white wheats have been crossed, and the produce is generally very translucent, and of an amber shade of colour."—*Morning Post.*

"We hope that the English farmer may be the first to avail himself of these better sorts of wheat. There can be no best sort of wheat for all districts. Only for particular situations, soils, and climates are the various wheats naturally adapted."

MR. H. EVERSHED, in *The Daily Chronicle.*

In a review on Mr. Eversheds' article, "Varieties of Wheat and Methods of Improving them," in the "Journal of the Royal Agricultural Society," *The Agricultural Gazette* of May 13th, 1889, remarks: "When all the new crosses raised by this Firm (Messrs. Carters) with such assiduous painstaking come into the market, there will be a greatly improved selection of varieties to suit different circumstances."

# REASONS WHY Every English, Irish, and Scotch Farmer SHOULD SOW CARTERS' CROSS BRED WHEATS.

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**BECAUSE Early Wheats are Wanted,** and  
Carters' Cross Bred Wheats ripen earlier than other varieties.

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**BECAUSE Prime Quality is Wanted** by Millers,  
and Carters' Cross Bred Wheats are pronounced to be of very superior  
milling properties, comparing favourably with the best foreign grain.

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**BECAUSE Heavy & Certain Crops are Wanted,**  
and Carters' Cross Bred Wheats are remarkable for extreme vigour, hardiness,  
and productiveness.

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**BECAUSE Good Straw is Wanted,** and Carters'  
Cross Bred Wheats are remarkable for cleanliness and brightness of Straw  
—that of many of the varieties being eagerly sought after by the Straw-  
plaiting Trade.

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"If English farmers are to grow Wheat successfully, they must cultivate only those varieties  
that possess the merits of early maturity, abundance of straw of fine quality, productiveness, and  
high quality, so that in view of keen foreign competition the grain may hold its own in the  
estimation of millers, or prove valuable for mixing with the hardest grains of India and America."

MR. H. EVERSHED, in the *Journal of the Royal Agricultural Society of England*.

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**JAMES CARTER & CO.,**  
SEED CORN GROWERS AND EXPERTS,  
237 & 238, HIGH HOLBORN, LONDON, W.C.